Summer 2021

# The Effects of Parent-Implemented Demanded Eye Contact as a Component of EID on Child Compliance

Halley Claire Blanchard

# THE EFFECTS OF PARENT-IMPLEMENTED DEMANDED EYE CONTACT AS A COMPONENT OF EID ON CHILD COMPLIANCE

by

Halley Blanchard

A Thesis
Submitted to the Graduate School,
the College of Education and Human Sciences
and the School of Psychology
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Master of Arts

Approved by:

Dr. D. Joe Olmi, Committee Chair
Dr. Crystal N. Taylor
Dr. Michael Mong

August 2021

***Published by the Graduate School***

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

ABSTRACT

Effective instruction delivery (EID) is an eight-step strategy that has been shown to be effective at increasing child compliance across classroom and clinical settings (Everett et al., 2005; Ford, 1998; Mandal et al., 2000; Scoggins, 2005). Component analyses investigating the relative importance of eye contact components of EID have obtained mixed results in clinical settings (Everett et al., 2005; Faciane, 2001; Faciane, 2004). Additionally, applied studies evaluating the effectiveness and treatment integrity of interventions delivered through telehealth have been largely behavior-analytic in nature (Lee et al., 2015; Seuss et al., 2013; Stich & Samaha, 2015; Wainer & Ingersoll, 2014). The current study sought to examine the effect of EID with and without its eye contact components as implemented by parents in the home setting and observed via videoconferencing, treatment integrity of parent implementation, and perceived treatment acceptability. While the effects of demanded eye contact were varied across participants, all parents exhibited high levels of treatment integrity and acceptability. Results and implications are discussed.

ACKNOWLEDGMENTS

I would like to thank my committee chair, Dr. Joe Olmi, for his support, time, and encouragement throughout this project. I would also like to thank my committee members, Dr. Crystal N. Taylor and Dr. Michael Mong, for their insight and support. This study was conducted amidst a global pandemic and was made possible by the dedication of these individuals. I would also like to thank Dr. Zachary LaBrot for his assistance in recruiting participants. I am grateful to the parents and children who participated in this study, dedicating their time and virtually opening their home for the completion of this project. Lastly, I would like to thank my colleagues in the School Psychology program at USM for assisting with data collection, including Sarah Litten, Terreca Cato, and Çagla Cöbek. Your time and effort are sincerely appreciated.

# DEDICATION

This project is dedicated to my grandmother, Katherine LeBlanc Landry, for her endless love, support, and comic relief throughout the years. I would also like to thank my parents, Brent and Rhea Blanchard, for their support and encouragement of my endeavors. I am also grateful to my siblings, Benton and Ava Blanchard, for their support and positive energies. Lastly, I would like to thank my friends for always pushing me to meet my goals. This project is a product of all your contributions to my life.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ILLUSTRATIONS

LIST OF ABBREVIATIONS

| | |
|---|---|
| *EID* | Effective Instruction Delivery |
| *EC* | Eye Contact |
| *NEC* | No Eye Contact |
| *TARF-R* | Treatment Acceptability Rating Form--Revised |
| *IOA* | Inter-Observer Agreement |

# CHAPTER I – INTRODUCTION

As defined by Wruble et al. (1991), compliance occurs when a child initiates one or more demanded responses. Marion (1983) further breaks down the definition of compliance into two components. The first component is the specification of the behaviors that are expected to be performed. The second is the specification of amount of time in which the behaviors are to be performed. Conversely, Rhode et al. (1995) define noncompliance as "not following a direction within a reasonable amount of time" (p. 4).

Child noncompliance is a frequently reported behavioral concern even among children that are not referred for treatment. According to Kalb and Loeber (2003), across a sample of six large, cross-sectional studies, 25-65% of parents of non-referred children reported some level of noncompliance. In a seminal article describing the course of disruptive behavior throughout development, Forehand and Wierson (1993) described a model of child development in which noncompliance in early childhood leads to coercive parent-child interaction, poor school performance and peer rejection in middle childhood, and delinquency in adolescence.

While noncompliance is a behavioral concern in itself, compliance is commonly viewed as a keystone behavior (Barnett et al., 1996; Ducharme & Shecter, 2011). Barnett et al. (1996) define keystone behaviors as behaviors that coincide with response classes of problem behaviors that can positively influence other behaviors, behaviors that cause other beneficial outcomes for both the individual and others in the environment, and foundational behaviors resulting in skills needed for adaptive functioning. Following this definition, increased child compliance has been shown to result in decreased problem behaviors, such as crying, aggression, and self-injurious behaviors, and results in other

positive behavioral outcomes aside from compliance, such as an improvement in academic performance (Matheson & Shriver, 2005; Russo et al., 1981).

## Variables Affecting Compliance

### *Consequent variables*

In general, consequent variables for compliance have been frequently investigated and deemed largely effective (Bellipanni, 2005; Everett, 2006; Marlow et al., 1997; Olmi et al., 1997; Radley & Dart, 2016). However, some consequent strategies have obtained less conclusive results than others in comparison. In a systematic review of 41 studies utilizing praise, positive nonverbal responses, reprimands, and negative nonverbal responses in compliance training, reprimands and negative nonverbal responses for instances of noncompliance resulted in higher levels of compliance, while praise and positive nonverbal responses for compliance obtained mixed results (Owen et al., 2012). Despite these mixed results, there has been a push towards investigating proactive antecedent approaches (i.e., preventing the occurrence of a problem behavior) rather than relying on reactive consequent approaches for behavior change (Kern & Clemens, 2007).

### *Antecedent variables*

Antecedent strategies for compliance are particularly valuable due to their potential to prevent noncompliance from occurring, therefore eliminating the need for consequent strategies such as punishment. One antecedent variable to compliance is the amount of time allowed between the delivery of the command and the child's response, also known as response latency. Wruble at al. (1991) conducted a study in which 15 non-referred, preschool-aged mother-child dyads were observed, and the amount of time that elapsed between the delivery of a command and the child's engagement in the task was

recorded in order to obtain an average response latency for compliance. For 85% of these observations, the response latency was 5.4 s or less (Wruble et al., 1991). This suggests that allowing at least 5 s for compliance before redelivering a command or delivering a punishment consequence might provide a child an appropriate amount of time to begin his or her response. Responding may occur prior to 5 s depending on a number of factors, such as the complexity of the demand or the developmental level of the child.

Time-in, associated with its counterpart consequent strategy, time-out, is another investigated antecedent variable that impacts compliance. Marlow et al. (1997) investigated the effects of time-in alone on child compliance versus the combined effects of time-in and time-out for three children with speech-language disorders. Time-in was defined as adult attention provided to the child in the form of verbal praise and physical touch in response to appropriate behavior. Comparatively, time-out was defined as the contingent removal of verbal praise and physical touch in response to inappropriate behavior. Compliance levels increased from 21%, 22%, and 27% respectively during baseline to 66%, 60%, and 66% during the time-in phase. Further increases in compliance were seen in the combined time-in and time-out phase, resulting in compliance percentages of 91%, 70%, and 93%. This suggests that manipulation of the antecedent variable (time-in) alone can produce change. However, the addition of time-out appeared to produce further improvements (Marlow et al., 1997). Other studies have investigated the effects of time-in on child compliance and have obtained similar results (Bellipanni, 2005; Ford, 1998; Marlow, 1997; Olmi et al., 1997).

In a systematic review of 42 studies evaluating eight antecedent strategies for compliance, Radley and Dart (2016) identified three antecedent strategies that are

evidence-based according to the What Works Clearinghouse's (WWC) single-case design standards: high-probability command sequences, errorless compliance training, and effective instruction delivery (EID). As defined by Rortvedt and Miltenberger (1994), a high-probability command sequence is a series of demands given to a child in which demands that a child is likely to comply with (high-probability commands) are presented immediately before demands that a child is less likely to comply with (low-probability commands). As defined by Ducharme and Diadamo (2005), errorless compliance training treats instances of noncompliance as errors that are minimized by beginning with the delivery of demands that are associated with higher rates of compliance. As compliance is achieved through the delivery of these commands over a series of weeks, commands that typically result in lower compliance are introduced. As it is the subject of the current proposed study, the third evidence-based strategy, EID (Ford, 1998), will be discussed as a collection of antecedent and consequent strategies designed to increase compliance.

*Command Type*. The manipulation of command type in order to increase child compliance has been a longstanding fixture in child compliance research (Roberts et al., 1978). As such, the structure of command delivery is a key variable affecting compliance. Early research differentiates commands into two main types: alpha commands and beta commands. An alpha command involves the delivery of a single specific instruction followed by a 5 s period of silence in order to allow for the opportunity to comply (Roberts et al., 1978). Beta commands are indirect, vague, presented as a question, or consist of multiple commands presented as a list. In a study of command type, Roberts et al. (1978) provided compliance training to the mothers of 27 children (ages three to seven) with compliance levels of 60% or less. Each mother was randomly assigned to

receive instruction on command delivery, command delivery and time-out, or a placebo/control training. Across both treatment groups, increases in compliance were evident following training. Specifically, training command delivery alone resulted in increases from 35.2% to 63.9%, training in command delivery and time-out resulted in increases from 35.2% to 83.3%, and the control training resulted in decreases from 35.2% to 28.5% (Roberts et al., 1978).

Matheson and Shriver (2005) conducted training sessions in which three general education teachers, each with a student with reported noncompliance issues, were taught to deliver alpha commands alone followed by alpha commands paired with contingent praise for child compliance. Student levels of compliance increased from 49.50% to 56.5%, 51.63% to 71%, and 44.5% 61.25% respectively with the teachers' use of alpha commands. Further increases occurred with the combined use of alpha commands and praise for compliance, resulting in compliance levels of 66.44%, 84%, and 67.50%. In addition, the academic performance of the students increased by 15.55-24.3% as compliance increased and disruptive behaviors decreased by 13.25-24.3% with improvement in compliance.

*Effective Instruction Delivery (EID).* EID is an instruction delivery strategy designed to increase compliance and is comprised of the following components: obtaining momentary eye contact before delivering commands, providing verbal praise for eye contact, delivering commands within close proximity of the child, using descriptive commands, delivering commands as direct statements, allowing 5 s for the child to comply with the command, and providing praise for compliance. The term EID, first used by Ford (1998), has since been utilized in subsequent studies (Bellipanni, 2013;

Faciane, 2001; Faciane, 2004; Roberts et al., 2008) and has been shown to be effective in increasing child compliance in clinical and classroom settings (Everett et al., 2005; Ford, 1998; Mandal et al., 2000; Scoggins, 2005).

Scoggins (2005) investigated the effectiveness of EID and contingent praise as classroom management strategies to increase compliance. Three Head Start preschool teachers referred for classroom behavioral concerns were trained in the implementation of EID and contingent praise. Increases in child compliance from baseline to the EID phase were 23.75%, 17.56%, and 7.98% respectively. Small additional increases in child compliance were shown in the first classroom during the contingent praise phase, increasing by roughly 4% from the EID phase. Interestingly, compliance decreased during the contingent praise phase by 10% in one classroom and 1% in another. The authors attributed this change to the poor treatment integrity observed across all teachers in the study, resulting in inconsistent implementation of the behavior management strategies. (Scoggins, 2005). This study, along with others that encompass multiple components of EID as well as consequent strategies, will be cited in multiple sections.

EID and time-in are frequently paired in order to increase child compliance. As such, several studies have investigated whether EID and time-in are effective together, on their own, or in conjunction with time-out in both classroom and clinic settings (Bellipanni et al., 2013; Ford, 1998; Levering, 2001; Mandal et al., 2000; Roberts et al., 2008). As such, previous research has shown that EID as a strategy is effective in increasing levels of compliance in both clinical and classroom settings. However, in order to minimize the time and resources required in the treatment of child noncompliance, analysis of the effects of individual components of EID is warranted.

## Components of EID

### *Proximity of Command Delivery*

Delivering commands within close proximity to the child is another key element of EID. Griffin (2007) evaluated the contributions of command type, contingent praise, and proximity on child compliance in a general education setting. Four students ranging from first to fourth grade were separated into two groups. In one group, the teacher delivered commands from a distance of five feet or less. In the second group, commands were delivered from a distance of over 10 feet. After this phase, one group received direct commands followed by question demands while the other received question commands followed by direct commands. In a final phase, contingent praise was provided in addition to EID across both groups. Results of this study indicated that commands were most effective when delivered from a distance of five feet or less and when presented as a direct statement (EID), resulting in compliance levels of 75% and 81%. In the final phase, the addition of contingent praise produced further increases in child compliance in both groups, resulting in compliance levels of 93% and 92% in the close proximity group and 80% and 85% in the distanced group (Griffin, 2007).

### *Eye Contact*

The following studies discussed in this section will serve as the basis of the proposed study's research questions. As such, these studies will be discussed in substantially more detail than those included in previous sections of this literature review.

A component of EID that has received limited attention is demanded eye contact prior to delivering a command. Instructing the child to make eye contact with the adult before a directive is delivered is typically accomplished by stating the child's name to

gain their attention followed by the delivery of the command. Hamlet et al. (1984) evaluated the effect of demanded eye contact on the compliance of two 11-year old students with reported compliance concerns. Following baseline, trials were conducted with each student in which the teacher would state the student's name, wait for a two-second period for the student to make eye contact, then present the student with a demand. If eye contact was not obtained, the teacher would state the student's name followed by the demand, "Look at me." A percentage of compliance with adult directives across trials was calculated for each session. For the first participant, baseline levels of compliance ranged from 20% to 40% with a mean of 30%. The eye contact condition resulted in compliance levels ranging from 60% to 80% with a mean of 70%. For the second participant, baseline levels of compliance ranged from 10% to 30% with a mean of 20%. The eye contact condition resulted in compliance levels ranging from 50% to 70% with a mean of 60% (Hamlet et al., 1984). But different from the component in EID, the demanded eye contact was only offered after noncompliance to a presented directive and not in advance of the presented directive.

Everett et al. (2005) sought to determine the contributions of demanded eye contact and contingent praise to EID in a study utilizing a multiple baseline design across participants for two children and a nonconcurrent multiple baseline design across participants for two more children. Four children referred for compliance concerns were selected to participate in the study (two four-year-old and nine-year-old girls along with two four-year-old and six-year-old boys). The dependent variable for this study was the percentage of child compliance with adult directives. Prior to the study as determined in a screening session, each child had compliance levels of 40% or less. The independent

variable was adult adherence to EID procedures, including proximity, descriptive wording, 5 s latency period, demanded eye contact, direct instructional format, and contingent praise for compliance (Everett et al., 2005).

During baseline, 20-minute (or 20 demands) sessions took place in which the parents were instructed to deliver commands in a manner that they typically would. Following baseline, parents were trained in the implementation of EID and contingent praise (CP) until parents implemented both with 80% treatment integrity. The first experimental phase consisted of every EID component besides demanded eye contact. The second experimental phase introduced demanded eye contact in addition to the other EID components. Lastly, a third experimental phase included CP with every EID component.

For all participants, results demonstrated a stepwise increase in compliance with the addition of each component. Therefore, the combination of EID, demanded eye contact, and contingent praise for compliance resulted in the highest levels of child compliance. Specifically, the first participant displayed an increase from 51% to 63% followed by an additional increase to 73%, and the second participant displayed an increase from 51% to 66% followed by an additional increase to 81%. Notably, however, the parents who participated in the study occasionally used CP when they were instructed not to do so, thereby making effects difficult to determine (Everett et al., 2005).

In another study investigating these variables, Faciane (2001) evaluated the effects of demanded eye contact and praise for eye contact on child compliance. Three children ranging from three to four years of age who were referred to a university clinic for compliance concerns participated in the study. One participant presented with

developmental delays. Similar to Everett et al. (2005) participants and their parents completed three 15-minute screening sessions in which the parents delivered 15 commands to be used for the remainder of the study. After screening, 3 ten-minute baseline sessions were conducted in which 10 of the 15 commands were randomly selected and delivered by the experimenter in the same manner as the parent. Time-in and contingent praise were implemented using the same ratios as exhibited by the parents during screening sessions. The percentage of demands complied with within 5 s of delivery were recorded.

The three experimental conditions manipulated in this study included eye contact with praise, eye contact with no praise, and no eye contact with no praise. The order of the three conditions was selected at random during each session. Each condition lasted for 10 min. Commands delivered, time-in, and contingent praise for compliance during experimental conditions were the same as during baseline and screening. During the eye contact with praise condition, the experimenter obtained eye contact using the same methods discussed in Faciane (2004). Once eye contact was established, praise was provided for eye contact prior to the delivery of a command. During the eye contact with no praise condition, a command was delivered immediately after establishing eye contact without providing praise. Lastly, during the no eye contact and no praise condition, the experimenter did not request eye contact nor provide praise for and eye contact established prior to delivering a command. An independent verification phase was conducted in order to determine the consistency of effects on child compliance.

Overall, compliance did not significantly improve from baseline during any of the treatment conditions. However, this lack of improvement may be due to flaws in

implementation. During several of the demanded eye contact conditions across participants, eye contact was not established. Even during guided compliance, participants closed their eyes in order to avoid eye contact. This makes it impossible to draw conclusions on the effect on compliance for those sessions. As such, no condition emerged as having produced significantly higher rates of compliance for one of the three participants, eliminating the need for an independent verification phase. This finding is inconsistent with previous compliance studies discussed in this review. For another participant, eye contact with no praise resulted in the highest levels of compliance. However, these effects were not maintained during the independent verification phase. For the third participant, eye contact and praise resulted in the highest levels of compliance. As before, this effect did not maintain during independent verification.

Faciane (2004) sought to evaluate the contribution of demanded eye contact beyond the effects on compliance generated by EID and contingent praise. Three typically-developing children referred to a psychology clinic for noncompliance were recruited for participation in the study. All participants were between the ages of two and three years old. All participants displayed initial mean percentage of compliance of 40% or less during screening sessions. Dependent variables included compliance with adult directives and the presence or absence of eye contact, defined as the child orienting their head towards the adult with eyes forward (Faciane, 2004). The baseline phase consisted of three sessions lasting 10 min each in which the experimenter, a graduate student, would present 10 randomly-selected commands that resulted in compliance of 35% or less during screening sessions. In order to control for the effects of EID, commands presented by the experimenter during baseline were identical to those presented by the

parents during screening sessions. Similarly, time-in was implemented for the same number of intervals as during the screening sessions.

During experimental sessions, two participants received alternating conditions for two 10-minute sessions per day, resulting in four total conditions. The third participant exhibited decreased compliance after the first two conditions, so he received one session per day. Time-in was delivered at rates equivalent to baseline sessions. Across all conditions, the same 10 commands as delivered in baseline were delivered in random order by the experimenter. However, these commands were altered in order to fit the requirements of EID.

Consistent with EID, contingent praise was provided for each instance of compliance with adult directives. During the eye contact condition, each command was preceded by a directive for the child to look at the experimenter. When the child engaged in eye contact following this directive, they received behavior-specific praise prior to the delivery of one of the 10 commands. If the child did not engage in eye contact, eye contact was established by the experimenter physically turning the child's head towards themselves. If eye contact was established after guided compliance, praise was provided. In the no eye contact condition, EID, time-in, and contingent praise were utilized in the same manner as during the eye contact condition. During this condition, however, eye contact was not requested or praised prior to the delivery of a command. The experimenter intentionally avoided eye contact prior to command delivery. Lastly, an independent verification phase was conducted in order to determine whether the effects of the most successful phase were consistent.

The results of the Faciane (2004) study were highly variable. Compliance rates increased from baseline for two of the three participants; however, all three baseline sessions were condensed into a single data point, decreasing one's ability to draw significant conclusions regarding improvement. In addition, for one of the two participants that appeared to respond to treatment, there was substantial overlap with baseline levels of compliance. For two participants, differences between compliance rates during the demanded eye contact and no demanded eye contact conditions were minimal. For the third participant, the demanded eye contact condition resulted in improved rates of compliance during the treatment phase. However, during the independent verification phase, compliance levels were lower than baseline levels (Faciane, 2004).

## Telehealth Service Delivery

### *Telehealth parent training*

The body of literature evaluating the efficacy of parent training conducted in a telehealth format is limited. Previous research has focused largely on the training of behavior-analytic skills, such as discrete trial training, conducting preference assessments, conducting functional analyses, and functional communication training (Lee et al., 2015; Seuss et al., 2013; Stich & Samaha, 2015; Wainer & Ingersoll, 2014). As such, additional research is warranted in the area of parent training for behavioral interventions through a web-based format.

Previous research has shown the value of EID as a method for improving child compliance with adult directives. While component analyses have been conducted in order to determine the fewest number of EID components required to improve compliance, research regarding the demanded eye contact component has been limited.

As such, the purpose of the current study was to evaluate the effects of demanded eye contact as a component of EID on child compliance as delivered by parents in a remote treatment format. Due to guidelines established by the CDC in response to the COVID-19 epidemic, this study also sought to evaluate the acceptability of utilizing telehealth service delivery in order to collect data, train parents on implementation of study procedures, and to assess treatment integrity. The following research questions were addressed:

1. Does demanded eye contact impact compliance to directives in children as a component of EID when implemented by parents in the home setting via telehealth?
2. Does training in EID procedures and the manipulation of demanded eye contact via telehealth result in acceptable levels of treatment integrity?
3. Do parents view telehealth training in EID procedures and the manipulation of demanded eye contact to be acceptable methods for treating child noncompliance?

# CHAPTER II - METHOD

## Participants and Setting

After receiving approval from the Institutional Review Board (Appendix G), recruitment of participants began. Participants for this study included three parent-child dyads recruited from the community through a university psychology clinic, physicians, and parents throughout the United States. Participants were recruited based on parent reports of compliance concerns. In order to minimize confounding variables which may have affected the outcome of this study, individuals identified as Developmentally Delayed or holding diagnoses of Intellectual Disability or Autism Spectrum Disorder were excluded from the study. Once the participants were recruited and proper consent had been obtained for telehealth consultation, at least three screening/baseline sessions took place via video call in the home setting. These consisted of observations of the child's compliance with parent/guardian directives. Child participants must have failed to comply with at least 60% of adult-delivered commands (Forehand & King, 1977) or less on average between the three sessions in order to qualify for participation in the study. Specifics of the screening sessions and parent training sessions are detailed later in this chapter. Parental consent for participation in the study was obtained along with consent for telehealth service provision (Appendix A).

The first participant, Jane, was a 10-year-old Caucasian female located in the Southeastern United States. Commands were delivered by her mother, a 38-year-old female. At the time of participation, Jane had no psychological diagnoses, and her mother had received no prior parent training. Baseline levels of compliance for Jane ranged from

30-40%, meaning that on average, she complied with 36.7% of her mother's demands upon first delivery.

The second participant, Charlotte, was a 3-year-old Caucasian female located in the Southeastern United States. Commands were delivered by her mother, a 30-year-old female. Charlotte had no prior psychological diagnoses, and her mother received no prior parent training. Baseline levels of compliance for Charlotte ranged from 20-45.5%, resulting in an average compliance with 30.73% of her mother's demands upon first delivery.

The third participant, William, was a 7-year-old Caucasian male located in the South-Central United States. Commands were delivered by his mother, a 35-year-old female. William had no previous psychological diagnoses, and his mother received no prior parent training. Baseline levels of compliance for William ranged from 30-50%, resulting in an average compliance with 41.8% of his mother's demands upon first delivery.

## Instruments and Materials

### *Treatment Acceptability Rating Form – Revised (TARF-R)*

The TARF-R (Appendix B) is a 20-item Likert scale rating form utilized to assess treatment acceptability and problem severity for parents. Scores obtained on the TARF-R range from 17 to 119. Higher values indicate higher acceptability ratings. For the first 17 items relating to treatment acceptability, Cronbach's alpha coefficients across measures and time are between .82 and .96 (M = .92). For two of the remaining three items relating to problem severity, Cronbach's alpha coefficients are between .92 and .96 (M = .94) (Reimers & Wacker, 1992). This measure is commonly used within the compliance

training literature to assess treatment acceptability (Bellipanni et al., 2013; Everett et al., 2005) and was utilized in its original form with no modifications.

*Zoom*

Zoom, as operated through a university license, is a HIPAA compliant application utilized for web conferencing via video chat and other forms of secure communication. In the application, a meeting host creates a secure meeting link and entry password for guests to use to join a meeting. All sessions with participants were conducted through this platform, including training, screening, and experimental observation sessions. All video sessions were recorded and stored on the principal investigator's secure cloud server for ease of data collection and analysis. Each session's recordings will be deleted from the server after completion of the project.

*Countee*

The mobile application, Countee, was used by trained graduate student observers for data collection, including recording the percentage compliance with demands. Specifically, frequency data of the number of commands delivered and the number of commands complied with were obtained. This application allows for the collection and storage of real-time data on a mobile device. While the application itself is not HIPAA compliant, data obtained were saved using a number ID in order to protect the identity of participants.

*Treatment Integrity Checklists*

Treatment integrity checklists for each phase of the study may be found in Appendices C and D. These checklists include each step of effective instruction delivery to be implemented during each treatment condition. Each demand delivered required its own treatment integrity checklists, resulting in 10 checklists for each session.

*Graduate Student Observers*

Data collectors consisted of graduate students who had been trained in direct observation as part of their professional development. The training is required at the beginning of each year of their participation in the School Psychology graduate program. In order to successfully complete the university training program, observers must demonstrate at least 90% inter-observer agreement on a single conditional probability observation with another graduate student who has previously completed the training. Additionally, graduate student observers were trained in the use of Countee by the primary investigator and were required to demonstrate 90% inter-observer agreement while using the application to collect compliance data in a role-playing scenario. All observers met this threshold during training.

## Dependent Measures

*Child Compliance*

The primary dependent variable for this study was the percentage child compliance with adult directives upon first delivery. Compliance was defined as the child engaging in any behavioral action associated with the requested activity or task within 5 s of the completion of the initial delivery of the demand and was computed as demands

complied with / total demands provided * 100). Compliance data were collected at the end of each session by reviewing the recorded footage.

*Treatment Integrity*

Parental treatment integrity was a secondary dependent variable of this study in order to determine the effectiveness of training implementation procedures via telehealth. The treatment integrity checklists for this study may be found in Appendices C and D. Each phase of this study required a different treatment integrity checklist, with one checklist including the initiation of demanded eye contact and the other omitting this step. Treatment integrity was reported as the percentage of checklist items completed each session (steps completed / total number of steps * 100). Treatment integrity data was collected throughout each session and performance feedback was provided to parents in real-time via text messages from the primary investigator. This feedback served as a partial control for treatment integrity; however, this allowed for clear assessment of the primary dependent variable.

*Treatment Acceptability*

The parents included in this study completed the TARF-R in order to determine the acceptability and perceived impact of demanded eye contact, praise for eye contact, and training on these procedures via telehealth. These data were collected at the conclusion of the study.

## Data Collection Procedures

Direct observations took place during each session and at the conclusion of each session for treatment integrity and child compliance, respectively. Compliance data were collected using a frequency measure of the number of demands presented during each

session and the number of demands complied with. A treatment integrity checklist specific to each condition was completed by the observer at the end of each trial prior to the beginning of the following trial.

## Experimental Design and Analysis

This study utilized an ABC design. This design addressed concerns related to possible participant attrition related to utilizing a multiple baseline design in a telehealth format as well as similarity between phases that would be difficult to differentiate between in an alternating treatments design. The phases for this study included the following: 1) baseline, 2) EID with no demanded eye contact (NEC), and 3) EID with demanded eye contact (EC). In order to control for sequence effects, the order of phases varied between participants. As such, an ABC sequence was utilized for two participants, while an ACB sequence was utilized for the remaining participant. Results were interpreted through visual analysis of level, trend, variability, consistency and immediacy of effect, and overlap of the obtained data (Horner et al., 2005). Effect size was calculated using Tau-U, a method for measuring non-overlap of data that accounts for trends (Vannest et al., 2016). Interpretation of obtained Tau-U effect sizes is as follows: 0.20 is a small effect, 0.2 to 0.6 is a moderate effect, 0.6 to 0.8 is a large effect, and above 0.8 is a very large effect (Vannest & Ninci, 2015).

## Procedures

### *Initial Contact*

Prior to the start of the study, potential participants were contacted via phone call in order to confirm interest in participation. After interest was confirmed, consent documents were emailed to the parents/guardians. At that point, a second phone call was

conducted in order to explain the consent process and confidentiality. When a signed consent form was received by the researcher, the screening phase began.

*Screening Session*

An initial screening session was conducted in order to determine whether the child met the criteria for participation in the study. The experimenter initiated a video call to each parent through Zoom, ensuring that the camera was positioned in a manner in which both the parent and the child were visible and able to be observed. The parent was instructed to deliver commands as they typically would in a natural setting. The experimenter used Countee to obtain a frequency of the number of commands delivered and the number of commands complied with by the child in order to obtain a percentage of compliance. The screening sessions each had a duration of 10 min or a period in which at least 10 directives were delivered, resulting in a single data point. Children whose mean level of compliance was below 60%, as described in Forehand and King (1977), qualified for participation in the study. If a participant met this criterion, they then participated in a minimum of two additional baseline sessions.

*Baseline*

General procedures and data collection for the baseline phase followed those of the screening session. With both the parent and child fully visible on a video call, the parent delivered at least 10 commands as they typically would in a natural setting during a 10-min observation session. If 10 commands were not delivered during the 10-min session, additional time was added until the 10-command criterion is met. Percent compliance data were collected along with EID treatment integrity data. A minimum of three 10-min baseline sessions with at least 10 delivered directives (e.g., “Hand me your

math homework") was conducted for each participant. Before entering into treatment phases, compliance data must have been stable or shown a decreasing trend. Screening session data were included as baseline data for those dyads selected for study participation.

*Initial Parent Training*

After being selected for study participation and before beginning parent training, each parent was provided a copy of the EID protocol modified for the NEC or EC condition (Appendices E or F). During parent training, the experimenter began a session via video call on Zoom and reviewed the EID protocol. Each component was modeled by the experimenter. After the review and modeling were complete, the parent delivered commands to their child as practiced. Performance feedback was provided via text. Mastery was defined as the parent completing 100% of the steps listed on the treatment integrity sheet (Appendices C or D). If the parent did not display mastery of the EID components, training was repeated. Of note, all parents achieved mastery within three trials. After mastery of the components of EID had been demonstrated, experimental conditions began.

*EID Without Demanded Eye Contact (NEC)*

After completing training, two participants began the NEC phase. As before, a video call in which the parent and the child were fully visible and audible and in the home setting was the primary means of observation. The parent was instructed to deliver at least 10 demands while adhering to all components of EID provided on the modified (i.e. without eye contact) checklist. For each demand, the observer completed the modified treatment integrity checklist (Appendix C). If treatment integrity fell below

100% during a single session, the parent was retrained in the EID procedures for this phase prior to the next session. Following the conclusion of the session, the observer used the Countee application to obtain a frequency of commands delivered and a frequency of commands complied with. This was used to calculate a percentage of compliance for the session. Each session had a duration of 10 min or at least 10 delivered instructions. The NEC phase consisted of at least five sessions for each participant depending on the trend of the data path.

*Second Parent Training*

Following the conclusion of the previous phase, a second parent training occurred in order to teach either the full list of EID components (including obtaining and praising eye contact) or the list of EID components without eye contact. The protocols for this training may be found in Appendices E and F. This training was conducted in the same manner as the previous training while including the additional components.

*EID With Eye Contact (EC)*

After mastery was obtained during the second parent training, the remaining participant entered the other treatment condition in which the parent utilizes demanded eye contact as a component of EID. Procedures for the EC phase were the same as the NEC phase; however, the secondary treatment integrity checklist was utilized instead. Percent compliance and treatment integrity data were collected. Retraining occurred if treatment integrity fell below 100% during a single session. Each session had a duration of 10 min or at least 10 delivered instructions. The EC phase also consisted of a minimum of five sessions.

*Treatment Acceptability*

At the conclusion of the study, each parent was e-mailed a copy of the TARF-R in order to assess social validity and acceptability. After the measure was completed and returned to the primary researcher, debriefing occurred in which the parents were shown graphs of their child's compliance levels throughout the study.

*Inter-Observer Agreement (IOA)*

All sessions of this study were recorded through the Zoom platform. In compliance with WWC standards, a secondary observer viewed at least 30% of sessions for each phase and collected percent compliance data as well as treatment integrity data. Total count inter-observer agreement was calculated between the primary and secondary observers by dividing the smaller frequency observed (or number of steps completed) by the larger frequency observed (or number of steps completed) and multiplying by 100.

Inter-observer agreement for demands complied with for Jane was calculated as the following: 90.9% agreement for baseline, 100% agreement for NEC, and 92.9% agreement (range of 85.71-100%) for EC phases. Inter-observer agreement for Charlotte's compliance was calculated as the following: 75% agreement for baseline, 100% agreement for EC, and 85% agreement for NEC (range of 80-90%) phases. For William, inter-observer agreement for compliance was calculated as the following: 91% agreement for baseline, 91.67% (range of 83.33-100%) for NEC, and 83.33% for EC phases. Retraining occurred when agreement fell below an average of 90% for a phase, including reviewing operational definitions and troubleshooting technical difficulties associated with web-based observation.

Inter-observer agreement of parent treatment integrity for Jane was calculated as 97% agreement (range of 96-98%) for NEC and 92.11% agreement (range of 88.57-95.65%) for EC phases. Inter-observer agreement of parent treatment integrity for Charlotte was calculated as 96.38% agreement (range of 95.65-97.10%) for EC and 99% agreement (range of 98-100%) for NEC phases. Inter-observer agreement of parent treatment integrity for William was calculated as 94% agreement (range of 90-98%) for NEC and 92.31% agreement for EC phases.

# CHAPTER III - RESULTS

*Child Compliance*

Compliance percentages for Jane, Charlotte, and William are shown in Figures 1, 2, and 3, respectively. The first participant, Jane, complied with an average of 36.7% of her mother's commands during baseline. Following training on EID without eye contact components, an immediate 20% increase in compliance was observed. However, compliance throughout the NEC phase was variable. Jane's average compliance during the NEC phase was 50%, with session-by-session compliance ranging from 10-70%. While phases are typically extended until stable data are obtained, time restraints associate with busy parent and child schedules required progression to the next phase. Following training on EID with eye contact components included, no clear improvement in compliance was noted. However, data were slightly less variable during this phase. Jane's average compliance during the EC phase was 56%, with session-by-session compliance ranging from 40-70%. Tau-U calculations for baseline and NEC phases yielded an effect size of 0.6, indicating a moderate effect of treatment. Consistent with visual analysis, calculations for NEC and EC phases yielded an effect size of 0.12, reflecting small-to-no effect of the addition of eye contact.

The second participant, Charlotte, complied with an average of 30.73% of her mother's commands during baseline. Following training on EID with eye contact components, an immediate 50% increase in compliance from baseline was observed. Compliance levels maintained a consistently increasing trend throughout the EC phase apart from the final session in the phase. During this session, compliance decreased to 80%. Charlotte's average compliance during the EC phase was 86%, with session-by-

session compliance ranging from 70-100%. Following training on EID without eye contact components, compliance exhibited an increasing trend for the first two sessions. However, compliance levels decreased as the NEC phase continued. While phases are typically extended until stable data are obtained, time restraints required a conclusion of the study. Despite decreasing, the data in this phase maintained its overlap with the previous EC phase. Charlotte's average compliance during the NEC phase was 76%, with session-by-session compliance ranging from 60-90%. Tau-U calculations for baseline and EC phases yielded an effect size of 1, indicating a very large effect of treatment. Calculations for EC and NEC phases yielded an effect size of -0.48, indicating a moderate decreasing effect associated with the removal of eye contact components of EID.

The third participant, William, complied with an average of 41.8% of his mother's commands during baseline. Following training on EID without eye contact components, no immediate increase in level was noted. Similar to baseline, percentages of compliance were variable throughout the NEC phase. William's average compliance during the NEC phase was 52%, with session-by-session compliance ranging from 40-70%. Following training on EID with eye contact components included, no immediate increase in level was apparent. Of note, only one session has been conducted during this phase. Data collection will continue until 5 data points are obtained. For the session conducted during the EC phase, William's compliance was 60%. Tau-U calculations for baseline and NEC phases yielded an effect size of 0.4, indicating a moderate effect of treatment.

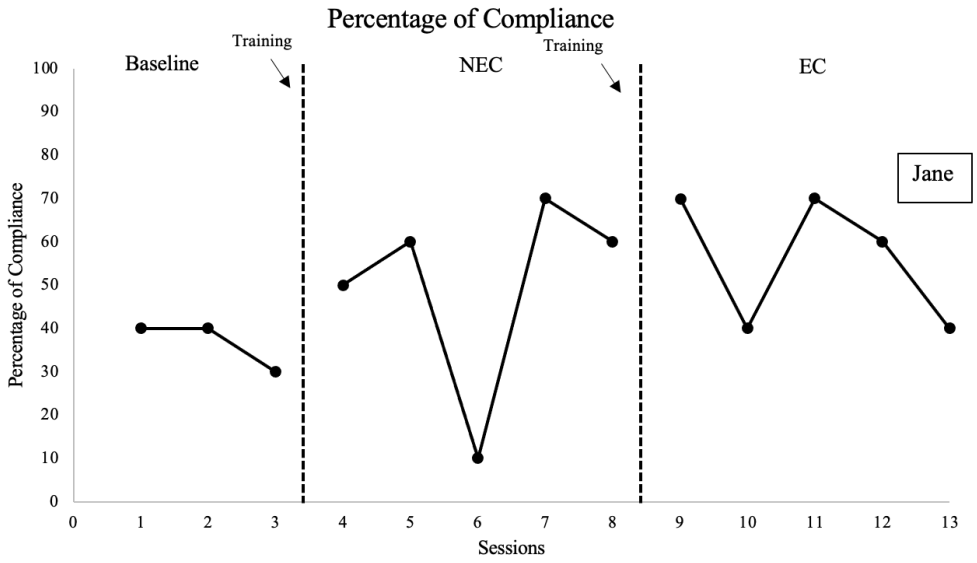


*Figure 1. Compliance Percentages for Jane.*

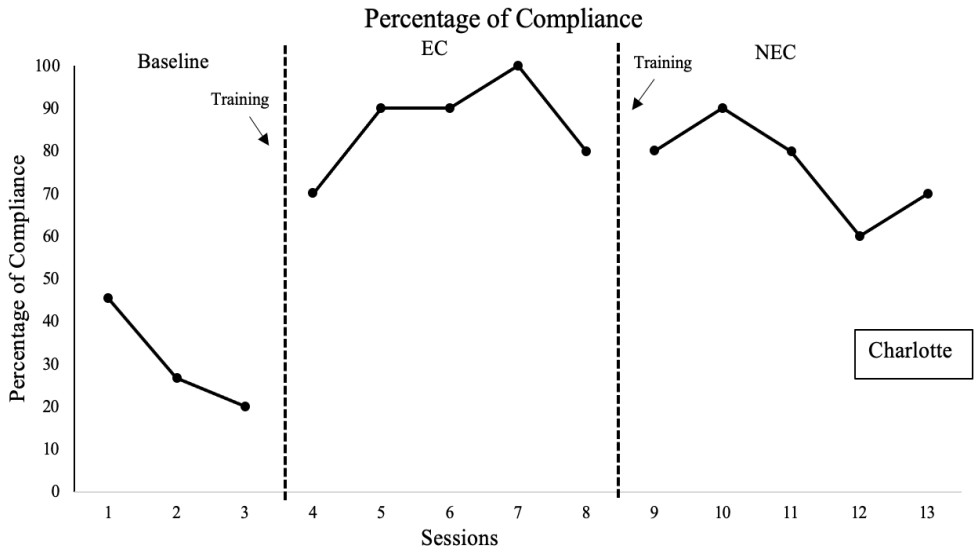


*Figure 2. Compliance Percentages for Charlotte.*

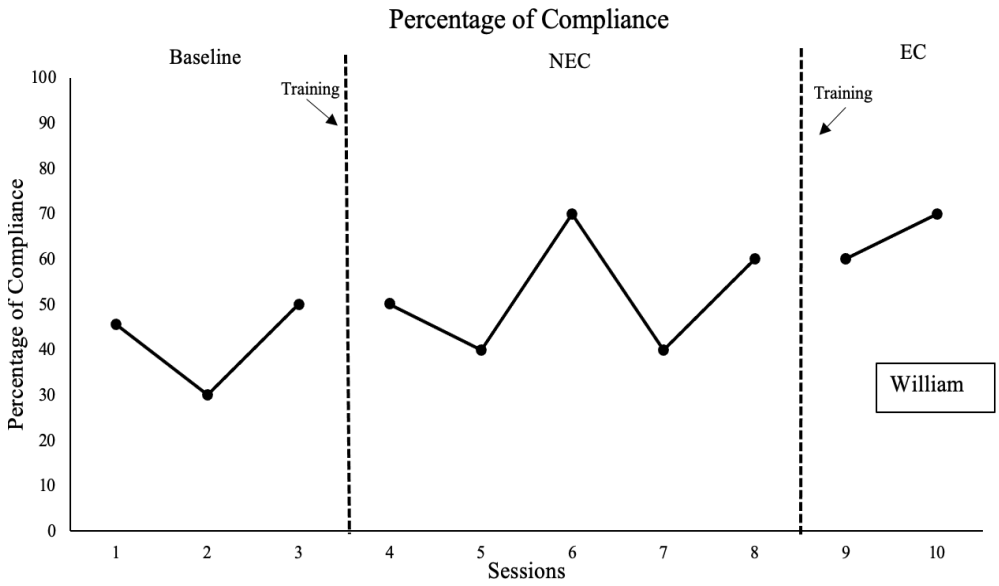


*Figure 3. Compliance Percentages for William.*

*Treatment Integrity*

Average parent treatment integrity for Jane, Charlotte, and William during each treatment condition are displayed in Table 1. During the NEC phase, Jane's mother's treatment integrity was 100% across all sessions. Jane's mother's treatment integrity during the EC phase averaged 96.86%, with session-by-session treatment integrity ranging from 91.43-100%. Charlotte's mother's treatment integrity during the EC phase averaged 98% (ranging from 95.71-100% across sessions), while treatment integrity during the NEC phase averaged 98.4% (ranging from 96-100% across sessions). William's mother's treatment integrity during the NEC phase averaged 96.4%, with session-by-session treatment integrity ranging from 90-100%. For the one EC session conducted, William's mother's treatment integrity was 92.86%.

Table 1

*Average Parent Treatment Integrity*

| Participant | NEC Parent Treatment Integrity | EC Parent Treatment Integrity |
|---|---|---|
| Jane | 100% | 96.86% |
| Charlotte | 98.4% | 98% |
| William | 96.4% | 92.86% |

*Treatment Acceptability*

On the TARF-R, a measure with a score range of 17 to 119 with higher scores indicating higher treatment acceptability, Jane's mother's responses resulted in a score of 110. Likewise, Charlotte's mother provided responses resulting in a score of 119. Responses from William's mother resulted in a score of 105. These scores indicate a high level of treatment acceptability from all parents.

# CHAPTER IV – DISCUSSION

The purpose of this study was to determine the contribution of eye contact as a component of parent-implemented EID to child compliance. Additionally, this study sought to evaluate the degree of treatment integrity and acceptability associated with parent training via telehealth. Following baseline, participants received training on either EID in its entirety (EC) or EID without demanded eye contact components (NEC). After completing five sessions in the first phase, parents then received training on the other EID format. Jane exhibited moderate but variable increases in levels of compliance during the NEC phase, but showed no change with the addition of eye contact. Charlotte's percentage of compliance increased by 50% from baseline during the EC phase. When demanded eye contact was removed during the NEC phase, her compliance began to show a decreasing trend. However, William's compliance did not substantially change in either treatment condition.

These findings are similar to those of Faciane (2004) in that the effects of eye contact as a component of EID appears to vary across participants. While two of the three participants showed improvements in overall levels of compliance with EID, Charlotte's average percentage compliance was greater with eye contact than without while Jane's compliance did not differ between the two conditions. As such, the importance of demanded eye contact as a component of EID appears to vary among children. Previous research by Everett at al (2005) indicates that the addition of demanded eye contact produces increased compliance when compared to effective instruction delivery without eye contact. Of note, Everett et al (2005)'s study was conducted in a clinical setting under controlled conditions that were not attainable through telehealth in the home. This factor

likely explains the differences in findings. Additionally, sessions with parents occurred once or twice per week due to extracurricular schedules of the children and work obligations of the parents. While treatment integrity in this study was notably high, the infrequency of meetings may have limited the extent to which parents were implementing these strategies outside of observation sessions. This likely decreased the observed effectiveness of the intervention during session. Based on the results of this study, the delivery of direct, specific commands within close proximity of a child while providing praise for compliance may produce socially significant change without additional components, while the addition of eye contact may produce further change.

In light of the COVID-19 pandemic and the restriction of in-person practice, the findings of this study related to treatment integrity are arguably more significant than those of compliance. Previous studies involving providing parent training via telehealth have largely focused on training parents to implement applied behavior analytic procedures, such as discrete trial training, functional analyses, and functional communication training (Lee et al., 2015; Seuss et al., 2013; Stich & Samaha, 2015; Wainer & Ingersoll, 2014). Across these studies, high levels of parent treatment fidelity were obtained through thorough training and performance feedback. However, research involving parent training for child noncompliance is novel. The integrity of parents' implementation of EID procedures taught through video conferencing during this study ranged from 90-100% throughout, with average implementation ranging from 92.86-100% across conditions. These high levels of treatment integrity, along with high treatment acceptability scores on the TARF-R, are promising for the effectiveness of

parent training through a telehealth format. This contributes to the literature base of evidence-based service provision during the COVID-19 pandemic.

*Limitations*

There are several limitations associated with this study. Due to the telehealth nature of the study, control of extraneous variables was difficult to achieve. For example, Jane exhibited significant problem behaviors during sessions, including eloping from the home, wrestling with her mother, yelling at her mother in response to demands (e.g., "I'm not your maid"), and flopping on the floor. Her mother responded to these behaviors with verbal reprimands, threatening to remove access to her iPad, laughing, and wrestling along with her. Additionally, William and his mother were often obstructed from view of the camera. These factors often interfered with the observers' abilities to identify clear commands and compliance, as well as establish whether changes in compliance were associated with the implementation of EID or other variables. Based on these limitations, the results of this study may be different if conducted in an in-person, clinic-based format. However, the limitations associated with telehealth also serve as relative strengths, including programming for generalization due to sessions being held in the unstructured home environment.

Inter-observer agreement was often variable across participants and phases. This is likely due to limitations associated with telehealth discussed above and the need for clarification of operational definitions throughout the study. For example, Jane often initiated compliance and stopped before completing the task (i.e., picking up her jacket but placing it on her head rather than in her room as directed). As the operational

definition for compliance for this study focused on the initiation of compliance rather than follow-through, these instances were coded as compliance with demands.

Additionally, treatment integrity was partially controlled by the primary investigator providing real-time performance feedback via text message during sessions. As such, conclusions regarding treatment integrity may be limited. Lastly, external validity of this study may be affected by only having three single-case participants, all participants sharing the same ethnicity and being from similar geographic regions, and having a single data point for William's EC phase at the time of data analysis.

*Future Directions*

The present study produced variable findings across participants. While this is consistent with the findings of Faciane (2004), further study is warranted in order to determine whether this variability is to be expected or is an anomaly associated with the limitations of this study or with the telehealth mode of delivery. There are several future directions that would address limitations posed in the previous section. For example, future studies may include providing parents with additional training on contingency management in order to control for consequences of noncompliance. Due to limitations associated with conducting intervention research via telehealth, this study may be replicated in a clinic setting to control for extraneous variables. As inter-observer agreement was variable in this study, future variations of this study should use more extensive operational definitions, including developing examples and non-examples of both demands and compliance. Lastly, as treatment integrity was partially controlled through the provision of performance feedback, future variations of this study may fade

feedback to occurring post-session rather than between each command delivered during session.

# APPENDIX A – CONSENT FORM

## Parent Consent Form

**Title of Study:** The Effects of Parent-Implemented Demanded Eye Contact as a Component of EID on Child Compliance
**Study Site:** The University of Southern Mississippi (Virtual through Zoom)
**Name of Researcher & University Affiliations:** Halley Blanchard; The University of Southern Mississippi

Dear Parent,

My name is Halley Blanchard and I am a graduate student at The University of Southern Mississippi in the School Psychology Doctoral Program. I am conducting my master's thesis which will assess the effect of eye contact on child compliance. This study is being conducted under the supervision of Dr. Joe Olmi.

You have indicated that noncompliance is a behavioral concern for your child. This intervention aims to increase your child's compliance with demands.

Please consider the following when deciding whether you will participate in this study:

**Purpose:**

The purpose of this study is to assess the effects of eye contact as a component of an evidence-based compliance training strategy on increasing child compliance and decreasing noncompliance. Effective Instruction Delivery (EID) is an instruction delivery strategy designed to increase child compliance with demands. This study will also assess the effectiveness of using a telehealth format to teach parents how to implement EID in their homes.

**Procedure:**

If you choose to participate in this study, you will be trained to perform strategies for delivering instructions to your child aimed towards increasing their likelihood of compliance. Training and observation sessions will take place via video call on Zoom. Before intervention, an initial screening session will be conducted in which you will be asked to deliver commands to your child as you normally would. From this session, your child's

current level of compliance will be calculated to determine whether or not they qualify for participation in this study. If your child does not qualify, your child will be referred to the Behavioral Health Clinic at The University of Southern Mississippi for optional services. If your child does qualify, you will be trained on the steps of each intervention. Upon displaying 100% of the steps successfully, the intervention phase will begin.

Effective Instruction Delivery (EID) is a strategy aimed at increasing child compliance with demands. Typically, EID consists of obtaining eye contact before delivering commands, providing praise for eye contact, delivering commands within close proximity of the child, using descriptive commands, delivering commands as direct statements, allowing 5 s for the child to comply with the command, and providing praise for compliance. During one phase of the study, you will be asked to implement EID in its entirety with your child. In another phase, you will be asked to implement EID without obtaining eye contact before delivering commands or praising eye contact. A trained USM graduate student will observe your sessions, provide feedback on your use of the intervention, and collect data on your child's compliance. All sessions will be recorded and stored on the primary investigator's secure online server for a maximum of two weeks.

**Benefits:**

Agreeing to participate in this study may provide benefits to you and your child. By participating in this study, you will receive training on a strategy commonly used to increase child compliance. As such, these strategies may help your child to follow adult directives.

**Risks:**

There appear to be very few risks to this study. The primary risk is associated with telehealth service delivery. All sessions will be recorded and occur in your home, posing possible privacy concerns. This risk will be minimized by the storage of the recordings on a secure university server and deletion of the recordings within two weeks from the date of the session.

**Will this information be kept confidential?**

Your name, the name of your child, and all behavior data will be kept confidential. To protect your privacy, you and your child will be assigned a number to be used on all forms and data files. At no time will your name be written on forms or data files. Please note that these records will be held by a state entity and are subject to disclosure if required by law.

**Who do I contact with research questions?**

If you have any questions, please contact Halley Blanchard at 985-590-7037 or Dr. Joe Olmi at 601-266-5693. If you have questions about your rights as a research participant, contact the USM Institutional Review Board at 601-255-5509.

**What if I do not want to participate?**

Participation in this study is completely voluntary, refusal to participate will involve no penalty or loss of benefits to which you are already entitled, and you may discontinue your participation at any time without penalty or loss of benefits.

**What if I DO want to participate?**

If you would like to participate, please sign below. You may keep a copy for your records.

_____ _____

Participant Signature Date

_____ _____

Investigator Signature Date

APPENDIX B – TARF-R

Treatment Acceptability Rating Form-Revised

*Please complete the items listed below. The items should be completed by placing a checkmark on the line under the question that best indicates how you feel about the experimenter's treatment recommendations.*

1. **How clear is your understanding of this treatment?**

Not at all ____ ____ ____ Neutral ____ ____ ____ Very clear

2. **How acceptable do you find the treatment to be regarding your concerns about your child?**

Not at all acceptable ____ ____ ____ Neutral ____ ____ ____ Very acceptable

3. **How willing are you to carry out this treatment?**

Not at all willing ____ ____ ____ Neutral ____ ____ ____ Very willing

4. **Given your child's behavioral problems, how reasonable do you find the treatment to be?**

Not at all reasonable ____ ____ ____ Neutral ____ ____ ____ Very reasonable

5. **How costly will it be to carry out this treatment?**

Not at all costly ____ ____ ____ Neutral ____ ____ ____ Very costly

6. **To what extent do you think there might be disadvantages in following this treatment?**

None likely ____ ____ ____ Neutral ____ ____ ____ Very likely

7. **How likely is this treatment to make permanent improvements in your child's behavior?**

Unlikely Neutral Very Likely

8. **How much time will be needed each day for you to carry out this treatment?**

Little time will be needed Neutral Much time will be needed

9. **How confident are you that the treatment will be effective?**

Not at all confident Neutral Very confident

10. **Compared to other children with behavioral difficulties, how serious are your child's problems?**

Not at all serious Neutral Very serious

11. **How disruptive will it be to the family (in general) to carry out this treatment?**

Not at all disruptive Neutral Very disruptive

12. **How effective is this treatment likely to be for your child?**

Not at all Effective Neutral Very effective

13. **How affordable is this treatment for your family?**

Not at all affordable Neutral Very affordable

**14. How much do you like the procedures used in the proposed treatment?**

| | | |
|---|---|---|
| Do not like them at all | Neutral | Like them very much |

**15. How willing will other family members be to help carry out this treatment?**

| | | |
|---|---|---|
| Not at all willing | Neutral | Very willing |

**16. To what extent are undesirable side-effects likely to result from this treatment?**

| | | |
|---|---|---|
| No side-effects at all | Neutral | Many side effects are likely |

**17. How much discomfort is your child likely to experience during the course of this treatment?**

| | | |
|---|---|---|
| No discomfort at all | Neutral | Very much discomfort |

**18. How severe are your child's behavioral difficulties?**

| | | |
|---|---|---|
| Not at all severe | Neutral | Very severe |

**19. How willing would you be to change your family routine to carry out this treatment?**

| | | |
|---|---|---|
| Not at all | Neutral | Very willing |

**20. How well will carrying out this treatment fit into the family routine?**

| | | |
|---|---|---|
| Not at all well | Neutral | Very well |

APPENDIX C – TREATMENT INTEGRITY CHECKLIST FOR NEC

Participant ID: Date: Session Number:

Treatment Integrity Checklist: No Eye Contact

_____ Commands were delivered within close proximity (5-10 feet) of the child

_____ Commands were delivered in a descriptive manner

_____ Commands were delivered as directives rather than questions

_____ The child was allowed 5-10 s to respond before representing the demand

_____ Praise was provided for compliance with demands

_____/5 steps completed = _____

## APPENDIX D – TREATMENT INTEGRITY CHECKLIST FOR EC

Participant ID: Date: Session Number:

### Treatment Integrity Checklist: Eye Contact

_____ Commands were delivered within close proximity (5-10 feet) of the child

_____ Momentary eye contact was obtained before presenting a demand ("_____, look at me.")

_____ Praise was provided for eye contact

_____ Commands were delivered in a descriptive manner

_____ Commands were delivered as directives rather than questions

_____ The child was allowed 5-10 s to respond before representing the demand

_____ Praise was provided for compliance with demands

_____/7 steps completed = _____

## APPENDIX E – EID PROTOCOL WITHOUT EYE CONTACT

EFFECTIVE INSTRUCTION DELIVERY-

Effective Instruction Delivery (EID) is an evidence-based procedure for increasing the extent to which students comply with adult instructions. EID is an antecedent-based, proactive approach for increasing student compliance. EID includes having adults change the manner in which they deliver instructions to students. Below are specific directions for using EID.

1. Close proximity (be within 5 to 10 feet of the student as opposed to across the room)
2. Directive versus a Question, (i.e., "Hand me the ball", vs. "Can you give me the ball?")
3. Descriptive, (i.e., the yellow ball, or the red book)
4. Allow 5 s for the student to comply
5. Praise for Compliance, (i.e., "Good job bringing me the ball.")

Examples:

"Hand me the yellow ball {5 sec wait to comply}, Eden great job handing me the yellow ball!"

"Begin working on your math worksheet{ 5 s wait to comply}, Awesome! Thanks for getting started on your math worksheet."

Remember: Praise should be specific and labeled. Additionally, it is important to pair praise with other reinforcers (e.g., access to preferred items/activities).

**MODIFIED FROM THE UNIVERSITY OF SOUTHERN MISSISSIPPI'S SCHOOL PSYCHOLOGY PROGRAM**

## APPENDIX F – EID WITH EYE CONTACT

EFFECTIVE INSTRUCTION DELIVERY-

Effective Instruction Delivery (EID) is an evidence-based procedure for increasing the extent to which students comply with adult instructions. EID is an antecedent-based, proactive approach for increasing student compliance. EID includes having adults change the manner in which they deliver instructions to students. Below are specific directions for using EID.

1. Close proximity (be within 5 to 10 feet of the student as opposed to across the room)
2. Eye Contact "Brad, look at me please."
3. Contingent Praise for Eye Contact, (i.e., "Good job looking at me")
4. Directive versus a Question, (i.e., "Hand me the ball", vs. "Can you give me the ball?")
5. Descriptive, (i.e., the yellow ball, or the red book)
6. Allow 5 s for the student to comply
7. Praise for Compliance, (i.e., "Good job bringing me the ball.")

Examples:

"Brad look at me, Good job looking at me! Hand me the yellow ball {5 sec wait to comply}, Eden great job handing me the yellow ball!"

"Brad, look at me. Wonderful Brad, great job looking at me! Begin working on your math worksheet{ 5 s wait to comply}, Awesome! Thanks for getting started on your math worksheet."

Remember: Praise should be specific and labeled. Additionally, it is important to pair praise with other reinforcers (e.g., access to preferred items/activities).

**MODIFIED FROM THE UNIVERSITY OF SOUTHERN MISSISSIPPI'S SCHOOL PSYCHOLOGY PROGRAM**

# APPENDIX G –IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

118 COLLEGE DRIVE #5125 • HATTIESBURG, MS | 601.266.6576 | USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.
- Face-to-Face data collection may not commence without prior approval from the Vice President for Research's Office.

PROTOCOL NUMBER: IRB-20-482
PROJECT TITLE: The Effects of Parent-Implemented Demanded Eye Contact as a Component of EID on Child Compliance
SCHOOL/PROGRAM: School of Psychology, Psychology
RESEARCHER(S): Halley Blanchard, D Olmi

IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited
7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: November 12, 2020

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

# REFERENCES


Barnett, D. W., Bauer, A. M., Ehrhardt, K. E., Lentz, F. E., & Stollar, S. A. (1996). Keystone targets for change: Planning for widespread positive consequences. *School Psychology Quarterly*, *11*(2), 95–117. https://doi.org/10.1037/h0088923

Bellipanni, K. D. (2005). *Antecedent and consequent components in a compliance training package* [Unpublished doctoral dissertation]. The University of Southern Mississippi.

Bellipanni, K. D., Tingstrom, D. H., Olmi, D. J., & Roberts, D. S. (2013). The Sequential Introduction of Positive Antecedent and Consequent Components in a Compliance Training Package With Elementary Students. *Behavior Modification*, *37*(6), 768–789. https://doi.org/10.1177/0145445513501959

Ducharme, J. M., & Diadamo, C. (2005). An Errorless Approach to Management of Child Noncompliance in a Special Education Setting. *School Psychology Review*, *34*(1), 107–115. https://doi.org/10.1080/02796015.2005.12086278

Ducharme, J. M., & Shecter, C. (2011). Bridging the Gap Between Clinical and Classroom Intervention: Keystone Approaches for Students With Challenging Behavior. *School Psychology Review*, *40*(2), 257–274. https://doi.org/10.1080/02796015.2011.12087716

Everett, G. (2003). *Assessing the contributions of eye contact, instruction type, and contingent praise to effective instruction delivery in compliance training* [Unpublished master's thesis]. The University of Southern Mississippi.

Everett, G. E., Olmi, D. J., Edwards, R. P., & Tingstrom, D. H. (2005). The Contributions of Eye Contact and Contingent Praise to Effective Instruction Delivery in Compliance Training. *Education and Treatment of Children*, *28*(1), 48–62.

Faciane, S. A. (2001). *An investigation into the effects on compliance of eye contact versus no eye contact and praise versus no praise for eye contact* [Unpublished master's thesis]. The University of Southern Mississippi.

Faciane, S. A. (2004). *An investigation into the effects of eye contact on child compliance* [Unpublished doctoral dissertation]. The University of Southern Mississippi.

Ford, A. D. (1998). *An evaluation of the contributions of effective instruction delivery to a compliance training package for children* (dissertation).

Forehand, R., & King, H. E. (1977). Noncompliant Children: Effects of Parent Training on Behavior and Attitude Change. *Behavior Modification*, *1*(1), 93–108. https://doi.org/10.1177/014544557711006

Forehand, R. L., & Wierson, M. (1993). The role of developmental factors in planning behavioral interventions for children: Disruptive behavior as an example. *Behavior Therapy, 24,* 117-141.

Griffin, J. R. (2007). *The contributions of instruction type, proximity, and contingent praise in a compliance training model* [Unpublished doctoral dissertation]. The University of Southern Mississippi.

Hamlet, C. C., Axelrod, S., & Kuerschner, S. (1984). Eye contact as an antecedent to compliant behavior. *Journal of Applied Behavior Analysis*, *17*(4), 553–557. https://doi.org/10.1901/jaba.1984.17-553

Horner, R. H., Carr, E. G., Halle, J., Mcgee, G., Odom, S., & Wolery, M. (2005). The Use of Single-Subject Research to Identify Evidence-Based Practice in Special Education. *Exceptional Children*, *71*(2), 165–179. https://doi.org/10.1177/001440290507100203

Kalb, L. M., & Loeber, R. (2003). Child Disobedience and Noncompliance: A Review. *Pediatrics*, *111*(3), 641–652. https://doi.org/10.1542/peds.111.3.641

Kern, L., & Clemens, N. H. (2006). Antecedent strategies to promote appropriate classroom behavior. *Psychology in the Schools*, *44*(1), 65–75. https://doi.org/10.1002/pits.20206

Lee, J. F., Schieltz, K. M., Suess, A. N., Wacker, D. P., Romani, P. W., Lindgren, S. D., … Dalmau, Y. C. P. (2014). Guidelines for Developing Telehealth Services and Troubleshooting Problems with Telehealth Technology When Coaching Parents to Conduct Functional Analyses and Functional Communication Training in Their

Homes. *Behavior Analysis in Practice*, *8*(2), 190–200. https://doi.org/10.1007/s40617-014-0031-2

Levering, K. K. (2001). *Functional analysis of antecedent conditions: assessing instructions and time-in as antecedents to compliance* [Unpublished doctoral dissertation]. The University of Southern Mississippi.

Mandal, R. L., Olmi, D. J., Edwards, R. P., Tingstrom, D. H., & Benoit, D. A. (2000). Effective Instruction Delivery and Time-In: Positive Procedures for Achieving Child Compliance. *Child & Family Behavior Therapy*, *22*(4), 1–12. https://doi.org/10.1300/j019v22n04_01

Marion, M. (1983). Child Compliance: A Review of the Literature with Implications for Family Life Education. *Family Relations*, *32*(4), 545. https://doi.org/10.2307/583695

Marlow, A. G., Tingstrom, D. H., Olmi, D. J., & Edwards, R. P. (1997). The Effects of Classroom-Based Time-In/Time-Out on Compliance Rates in Children with Speech/Language Disabilities. *Child & Family Behavior Therapy*, *19*(2), 1–15. https://doi.org/10.1300/j019v19n02_01

Matheson, A. S., & Shriver, M. D. (2005). Training Teachers to Give Effective Commands: Effects on Student Compliance and Academic Behaviors . *School Psychology Review*, *34*(2), 202–219.

Olmi, D. J., Sevier, R. C., & Nastasi, D. F. (1997). Time-in/time-out as a response to noncompliance and inappropriate behavior with children with developmental disabilities: Two case studies. *Psychology in the Schools, 34*(1), 31–39.

Owen, D. J., Slep, A. M. S., & Heyman, R. E. (2012). The Effect of Praise, Positive Nonverbal Response, Reprimand, and Negative Nonverbal Response on Child Compliance: A Systematic Review. *Clinical Child and Family Psychology Review, 15*(4), 364–385. https://doi.org/10.1007/s10567-012-0120-0

Radley, K. C., & Dart, E. H. (2015). Antecedent Strategies to Promote Children's and Adolescents' Compliance with Adult Requests: A Review of the Literature. *Clinical Child and Family Psychology Review, 19*(1), 39–54. https://doi.org/10.1007/s10567-015-0197-3

Reimers, T. M., & Wacker, D. P. (1992). Acceptability of behavioral treatments for children: Analog and naturalistic evaluation by parents. *School Psychology Review, 21*(4).

Rhode, G., Jenson, W. R., Reavis, H. K. (1995). *The tough kid book: Practical classroom management strategies.* Longmont, CO: Sopris West.

Roberts, D. S., Tingstrom, D. H., Olmi, D. J., & Bellipanni, K. D. (2008). Positive Antecedent and Consequent Components in Child Compliance Training. *Behavior Modification, 32*(1), 21–38. https://doi.org/10.1177/0145445507303838

Roberts, M. W., Mcmahon, R. J., Forehand, R., & Humphreys, L. (1978). The effect of parental instruction-giving on child compliance. *Behavior Therapy, 9*(5), 793–798. https://doi.org/10.1016/s0005-7894(78)80009-4

Rortvedt, A. K., & Miltenberger, R. G. (1994). Analysis Of A High-Probability Instructional Sequence And Time-Out In The Treatment Of Child Noncompliance. *Journal of Applied Behavior Analysis*, *27*(2), 327–330. https://doi.org/10.1901/jaba.1994.27-327

Russo, D. C., Cataldo, M. F., & Cushing, P. J. (1981). Compliance training and behavioral covariation in the treatment of multiple behavior problems. *Journal of Applied Behavior Analysis*, *14*(3), 209–222. https://doi.org/10.1901/jaba.1981.14-209

Scoggins, M. D. (2005). *The use of effective instruction delivery and contingent praise as a classroom behavior management strategy* [Unpublished doctoral dissertation]. The University of Southern Mississippi.

Stich, J. M., & Samaha, A. *Evaluating Preference For and Effectiveness of Telehealth and In-Person Parent Training* [Unpublished doctoral dissertation]. University of South Florida.

Suess, A. N., Romani, P. W., Wacker, D. P., Dyson, S. M., Kuhle, J. L., Lee, J. F., … Waldron, D. B. (2013). Evaluating the Treatment Fidelity of Parents Who Conduct In-Home Functional Communication Training with Coaching via

Telehealth. *Journal of Behavioral Education*, *23*(1), 34–59. https://doi.org/10.1007/s10864-013-9183-3

Vannest, K. J., & Ninci, J. (2015). Evaluating Intervention Effects in Single-Case Research Designs. *Journal of Counseling & Development*, *93*(4), 403–411. https://doi.org/10.1002/jcad.12038

Vannest, K.J., Parker, R.I., Gonen, O., & Adiguzel, T. (2016). *Single Case Research: web based calculators for SCR analysis*. (Version 2.0) [Web-based application]. College Station, TX: Texas A&M University. Retrieved Saturday 25th July 2020.

Wainer, A. L., & Ingersoll, B. R. (2014). Increasing Access to an ASD Imitation Intervention Via a Telehealth Parent Training Program. *Journal of Autism and Developmental Disorders*, *45*(12), 3877–3890. https://doi.org/10.1007/s10803-014-2186-7

Wruble, M. K., Sheeber, L. B., Sorensen, E. K., Boggs, S. R., & Eyberg, S. (1991). Empirical Derivation of Child Compliance Time. *Child & Family Behavior Therapy*, *13*(1), 57–68. https://doi.org/10.1300/j019v13n01_04